

Tight Glucose Control = Tight Mind

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It's becoming increasingly clear that managing diabetes by maintaining tight glucose control can translate into better mental health in the long run for people with type 2 diabetes.

Today, the rate of Alzheimer's disease diagnosis in people older than 50 is increasing, along with their waistlines and occurrence of diabetes. Although it's not fully clear how diabetes and Alzheimer's are linked, some speculate that diabetes may cause blood sugar to build up in the brain, which could damage brain cells.

A new study presented at the 10th International Conference on Alzheimer's Disease and Related Disorders in Madrid showed that people who already have type 2 diabetes have an increased risk of dementia and Alzheimer's disease.

For the study, more than 22,000 patients older than 50 who were diagnosed with type 2 diabetes were enrolled in the Kaiser Permanente of Northern California Diabetes Registry. The patients were surveyed between 1994 and 1996, then followed until 2005. The results showed that tight glucose control -- keeping glucose readings in the recommended ranges -- decreased the incidence of Alzheimer's or dementia in patients with diabetes or pre-diabetes. On the other hand, researchers reported that those who lacked tight glucose control ran the greatest risk for developing dementia.

Other findings include:

- Patients with an HbA1C greater than 15 percent had a 78 percent elevated risk of developing dementia compared with patients with an HbA1C of less than

10 percent. The American Diabetes Association (ADA) recommends that patients remain at a level lower than 7 percent.

- The study concluded that patients with pre-diabetes had a 67 percent increased risk of developing dementia and a 77 percent increased risk for developing Alzheimer's. They also found that the risk increased even more if the patients were hypertensive, meaning that their systolic blood pressure is 180 mm or higher.

Although the study focused on older patients, diabetic monitoring and maintaining tight glucose control, particularly for patients with type 2 diabetes, is important for patients of any age. It's never too early to fight against the onset of dementia, as diabetes has long been known for causing silent damage to the body's internal systems. As difficult as this may be to detect with physical symptoms, we may be even less likely to notice increased forgetfulness or other mental symptoms.

What you can do

Variations in glucose levels may be caused by diet, but it's not always a question of eating too much cake. Stress and infection are also common triggers. And it's not necessarily easy to maintain tight glucose control – if it was, everyone would be doing it successfully. Many people simply don't control their glucose levels at all. Others manage to control it for a period of time, but eventually begin to let it slide. However, failing to monitor glucose levels is like driving a car without a gas gauge. You have no idea what's going to happen or when you will run out of fuel.

The following chart can serve as a guide for managing diabetes and testing blood sugar levels. It's worth noting that while the ADA recommendations are current, the American Association of Clinical Endocrinologists (AACE) recommends even tighter glucose control. A number of primary care physicians and internists agree with the AACE targets and encourage their patients to adhere to those standards. Studies have shown that the tighter the glucose control, the lower the likelihood of developing complications.

American Diabetes Association recommended targets		American Association of Clinical Endocrinologists recommended targets
Fasting	70-100	70-110
Pre-meal	90-130	90-130
2hr after meal	<180	<140
Bedtime	100-140	100-140
HbA1C	<7.0	<6.5

To maintain tight glucose control, start by following your recommended diet plan, taking all diabetic medications as prescribed and exercising as directed by your doctor. Meanwhile, monitor your blood sugar regularly to ensure that it's in the recommended range.

Many people focus on testing blood sugar levels several times during the day, perhaps before or after meals and before bedtime. Some find this regimen hard to sustain, from finding time to the cost of the diabetic testing supplies. You may find it helpful to carry a glucose meter with you, in your purse or briefcase. As for the financial burden, more insurance companies now are covering the cost of diabetic testing equipment and supplies?

No time like the present

Remember that it's never too early – or too late – to start managing diabetes by maintaining tight control of your body's glucose levels. Monitoring your blood sugar helps arrest any damage already taking place. In some cases, the damage actually can be reversed. The sooner you start aggressively controlling your blood sugar levels, the further you will delay – and possibly prevent – the complications associated with diabetes. When you consider that dementia and Alzheimer's disease may one day be listed among common diabetes complications like vision loss or nerve damage, it's well worth the effort.

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